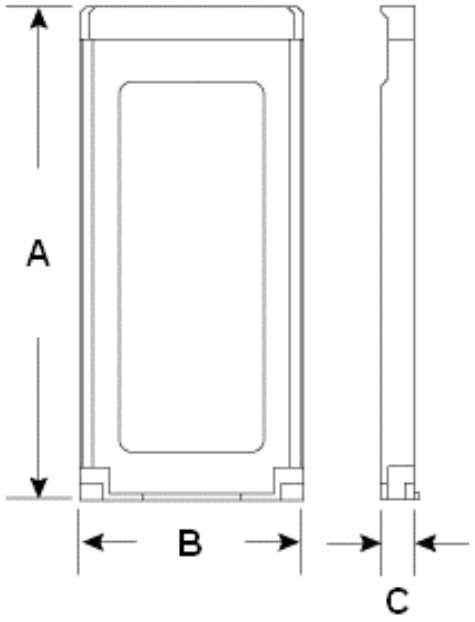
TS8GSSD34E-M
TS16GSSD34E-M
TS32GSSD34E-M

8GB~32GB ExpressCard34 SSD

Description

The ExpressCard™ SSD (Solid State Disk) is small in size, has a huge capacity and low power consumption making it perfect for use as a mobile storage solution in notebook computer with ExpressCard™ slot.

Outline



Features

- RoHS compliant products
- High-speed USB 2.0 specification, True Plug and Play functionality
- Fully compatible with ExpressCard™ standards and Operating Systems (OS) that support the USB standard
- Non-volatile Flash Memory for outstanding data retention
- Built-in ECC (Error Correction Code) functionality and wear-leveling algorithm ensures highly reliable of data transfer
- Compatible with Windows Vista and supports ReadyBoost function
- Low Power Consumption
- Shock resistance

System Requirement

- Hardware: An available ExpressCard™ slot on desktop or notebook computer
- Operating System: Windows® 2000, Windows® XP, Windows® Vista, Mac™ OS 10.4 or later, and Linux™ Kernel 2.4 or later

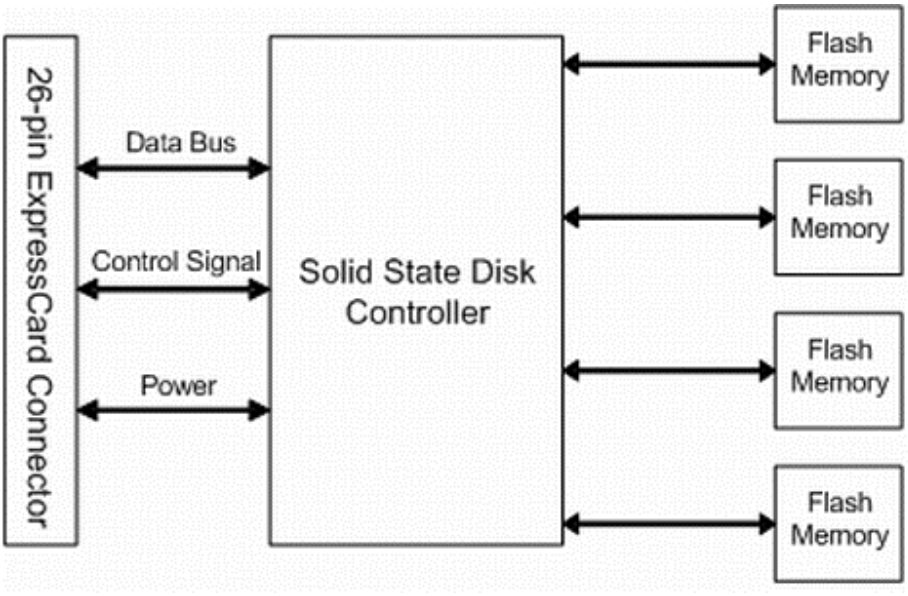
Dimensions

Side	Millimeters	Inches
A	75.00 ± 1.00	2.95 ± 0.04
B	34.00 ± 1.00	1.34 ± 0.04
C	5.00 ± 1.00	0.20 ± 0.04

Order Information

Transcend P/N	Capacity
TS8GSSD34E-M	8GB
TS16GSSD34E-M	16GB
TS32GSSD34E-M	32GB

Block Diagram



Pinouts

Pin No.	Pin Name
01	GND
02	USBD-
03	USBD+
04	GND
05	NC
06	NC
07	NC
08	NC
09	NC
10	NC
11	NC
12	NC
13	NC
14	3.3V
15	3.3V
16	NC
17	NC
18	NC
19	NC
20	GND
21	NC
22	NC
23	GND
24	NC
25	NC
26	GND

Pin Identification

Symbol	Function
USBD+ USBD-	USB serial data interface
3.3V	Primary voltage source
GND	Ground
NC	No connect

Specifications

Physical Specification		
Form Factor		ExpressCard/34
Storage Capacities		8 GB to 32 GB
Dimensions (mm)	**Length**	75.00 ± 0.10
	Width	34.00 ± 0.10
	Height	5.00 ± 0.10
Input Voltage		3.3V ± 5%
Weight		19 g
Connector		26-Pin ExpressCard connector

Environmental Specifications	
Operating Temperature	0 ℃ to 70 ℃
Storage Temperature	- 40 ℃ to 85 ℃

Power Requirements			
Input Voltage		3.3V ± 5%	
Mode		**TYP (mA)**	**TYP (W)**
Power Consumption (DC 3.3V @25℃)	**Write**	318.9	1.1
	Read	166.4	0.5
	Idle	100.8	0.3

Reliability	
Data Reliability	Supports BCH ECC 8 bits in 512 bytes
Data Retention	10 years
MTBF	1,000,000 hours

Interface Specification	
Interface	ExpressCard (USB 2.0)

Performance		
Model P/N	**Sequential Read**	**Sequential Write**
TS8GSSD34E-M	34 MB/s	21 MB/s
TS16GSSD34E-M	34 MB/s	21 MB/s
TS32GSSD34E-M	35 MB/s	25 MB/s

Regulations	
Compliance	CE, FCC and BSMI

Reliability

Wear-Leveling algorithm

The controller supports static/dynamic wear leveling. When the host writes data, the controller will find and use the block with the lowest erase count among the free blocks. This is known as dynamic wear leveling. When the free blocks' erase count is higher than the data blocks', it will activate the static wear leveling, replacing the not so frequently used user blocks with the high erase count free blocks.

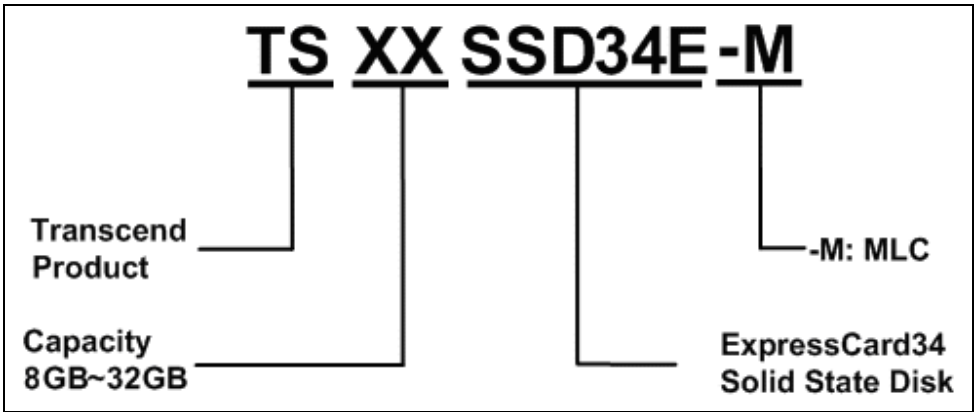
ECC algorithm

The controller use BCH8 ECC algorithm per 512 bytes. BCH8 can correct up to 8 random error bits within 512 data bytes.

Bad-block management

When the flash encounters ECC failed, program fail or erase fail, the controller will mark the block as bad block to prevent the used of this block and caused data lost later on.

Ordering Information



Above technical information is based on industry standard data and tested to be reliable. However, Transcend makes no warranty, either expressed or implied, as to its accuracy and assumes no liability in connection with the use of this product. Transcend reserves the right to make changes in specifications at any time without prior notice.

Transcend
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